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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,762	12/07/2005	Satoshi Murata	126711	5029
25944 7590 11/23/2009 OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				
EXAMINER				
MEYER, KATY E				
ART UNIT		PAPER NUMBER		
3618				
MAIL DATE		DELIVERY MODE		
11/23/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/559,762

**Applicant(s)**

MURATA, SATOSHI

**Examiner**

Katy Meyer

**Art Unit**

3618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3-6 and 9-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-6 and 9-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

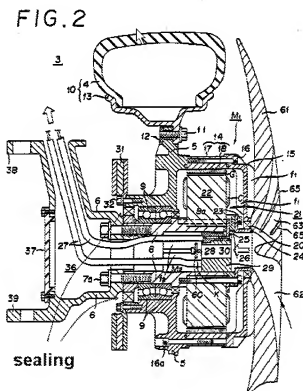
**Claims 1, 3, 9, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakurai et al. (US 4,913,258).**

A suspension system for a vehicle, comprising: an outer rotor type motor having a stator (21) provided on an outer surface of a cylindrical member (8) that defines a space open to at least an inboard side of the vehicle (see 36, Fig. 2), and a rotor (14) rotatably supported by the cylindrical member, wherein the outer rotor type motor is provided within a wheel (4) and the rotor of the outer rotor type motor is connected to the wheel; a suspension arm (6, 7) whose mounting portion is provided on an inner surface of the cylindrical member; and a hub (5) fixed to the wheel in the vicinity of a wheel rim (15) and connected to the cylindrical member via a bearing (9) that allows relative rotation between the cylindrical member and the wheel, wherein the hub has an annular shape (Fig. 3) so as to be accommodated between the cylindrical member and the rotor, such that load inputs to the wheel, such as vertical transverse loads and back-

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and-forth loads, are transmitted to the cylindrical member only via the rotor and the bearing, the load inputs then being received by the suspension arm.

Sakurai et al. further disclose a sealing between the cylindrical member and the rotor and a second bearing (see below – a copy of Fig. 2 of Sakurai et al. with notations added).



Sakurai et al. (US 4,913,258)

Sakurai et al. further disclose a double row angular bearing (see below – taken from Fig. 2).



Sakurai et al. (US 4,913,258)

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 4 – 6 and 11 – 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakurai et al. (US 4,913,258) in view of Schmid (US 6,057,617).**

Sakurai et al. meet all the limitations of the claimed invention, including a brake disk (31), but do not disclose a brake disk located within the space defined by the cylindrical member.

Schmid teaches an in-wheel motor wherein a brake disk (33.1 - 33.3) is connected to a rotor (13, via shaft 1 and rim 4) and disposed such that a disk surface of the brake disk is located within the space (32) defined by a cylindrical member (21).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system disclosed by Sakurai et al. so that the brake was housed within an inner space as taught by Schmid to provide a more compact system.

As for claim 5, Schmid teach a brake disk attached to a hub (4, via shaft 1) adjacent to a bearing (see 50). While Schmid discloses screws, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use bolts as a matter of obvious design choice.

Sakurai et al. further disclose a double row angular bearing (see above).

***Response to Arguments***

Applicant's arguments with respect to claims 1, 3 – 6, and 9 – 13 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katy Meyer whose telephone number is (571)272-5830. The examiner can normally be reached on Monday - Thursday, 8:00 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 571-272-7742. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. M./  
Examiner, Art Unit 3618

/Paul N. Dickson/  
Supervisory Patent Examiner, Art Unit 3616